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IS : 8291 - 1976

Indian Standard

**SPECIFICATION FOR
PHENTHOATE EMULSIFIABLE CONCENTRATES**

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**BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002**

Indian Standard

SPECIFICATION FOR PHENTHOATE EMULSIFIABLE CONCENTRATES

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AMENDMENT NO. 1 JUNE 1988

TO

IS:8291-1976 SPECIFICATION FOR PHENTHOATE
EMULSIFIABLE CONCENTRATES

(Page 4, clause 2.2.6) - Add the following Note
at the end of the clause:

'Note - The material need not be subjected to
heat treatment if it has crossed half of its shelf
life as ascertained from the date of manufacture
and date of expiry declared on the container.'

(AFCD 6)

Reprography Unit, BIS, New Delhi, India

AMENDMENT NO. 2 MAY 1994
TO
IS 8291 : 1976 SPECIFICATION FOR PHENTHOATE EC

(Page 4, clause 2.2.5) — Delete.

(Page 6, clause 4.1) — Substitute the following for the existing:

‘When freshly manufactured material in bulk quantity is offered for inspection, representative samples of the material shall be drawn and tested as prescribed in IS 10627 : 1983 within 90 days of its manufacture. When the material is offered for inspection after 90 days of its manufacture, sampling shall be done as prescribed in IS 10627 : 1983. However, the criteria for conformity of the material when tested, shall be the limits of tolerances, as applicable over the declared nominal value and given under clause 2.3.1 of the standard.’

Indian Standard

SPECIFICATION FOR PHENTHOATE EMULSIFIABLE CONCENTRATES

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 31 December 1976, after the draft finalized by the Pest Control Sectional Committee had been approved by the Agricultural and Food Products Division Council and the Chemical Division Council.

0.2 Phenthoate emulsifiable concentrates are largely used in the control of insect pests of agricultural importance. This standard has been prepared to facilitate the supply of phenthoate emulsifiable concentrates of a quality suitable for use under subtropical and tropical conditions.

0.3 Phenthoate emulsifiable concentrate is generally manufactured to contain 50 percent (m/m) of phenthoate.

0.4 In the preparation of this standard, due consideration has been given to the provisions of the Insecticides Act, 1968 and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under these, wherever applicable.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements and the methods of sampling and test for phenthoate emulsifiable concentrates.

2. REQUIREMENTS

2.1 Constituents — The material shall consist of phenthoate, technical, dissolved in suitable solvent(s), together with emulsifying agent(s), and with or without stabilizer(s).

*Rules for rounding off numerical values (revised).

IS : 8291 - 1976

2.1.1 Phenthoate, technical, employed in the manufacture of this material shall conform to IS : 8293-1976*.

2.2 Physical — The material shall comply with the following physical requirements.

2.2.1 Description — The material shall be in the form of clear, stable and homogeneous liquid, free from foreign matter.

2.2.2 Cold Test — No turbidity or separation of solid and/or oily matter shall occur when the material is subjected to the cold test at 10°C as prescribed in 13.1 of IS : 6940-1973† or any other lower temperature as agreed to between the purchaser and the vendor. For the purpose of this test, introduction of seeding crystal is not necessary.

2.2.3 Flash Point (Abel) — When determined by the method prescribed in IS : 1448 [P : 20]-1960‡, the flash point of the material shall be above 24.5°C.

2.2.4 Emulsion Stability — The creaming or the sediment, if any, shall not in either case exceed 2.0 ml at the top or bottom of the 100-ml cylinder, when tested by one of the methods prescribed in 13.3 of IS : 6940-1973‡. There shall also be no oil separation.

2.2.5 Heat Stability — After treating in accordance with the method prescribed in 13.4 of IS : 6940-1973† the material shall comply with the requirements of 2.2.1 to 2.2.4 and 2.3.1.

2.3 Chemical — The material shall comply with the chemical requirements given in 2.3.1, 2.3.1.1 and 2.3.2.

2.3.1 Phenthoate Content — When determined by the method prescribed in Appendix A of IS : 8293-1976*, the observed phenthoate content, percent mass/mass of any of the samples shall not differ from the nominal value by more than the appropriate percent tolerance as follows:

Nominal Value, Percent	Tolerance, Percent	
Up to 9	+ 10	} Of the nominal value
	- 5	
10 and below 50	± 5	
	+ 5	
50 and above	- 3	

*Specification for phenthoate, technical.

†Method of tests for pesticides and their formulations.

‡Methods of test for petroleum and its products, P : 20 Flash point by Abels apparatus.

2.3.1.1 The actual value of the phenthoate content in the formulation shall be calculated to two decimal places for rounding off to one decimal place before applying the tolerances given in 2.3.1.

2.3.2 Acidity or Alkalinity — When determined by the method prescribed in 11.3 of IS : 6940-1973*, the acidity (as H_2SO_4) shall be not more than 0.5 percent by mass; and alkalinity (as NaOH) shall not exceed 0.1 percent by mass.

3. PACKING AND MARKING

3.1 Packing — The material shall be packed in clean and dry containers made of mild steel or tinplate properly and suitably lacquered from inside. Aluminium containers may also be used. The containers shall also comply with the general requirements as stipulated in 2 of IS : 8190 (Part II)-1976†.

3.1.1 Retail pack of one litre shall be individually placed in transparent polyethylene bags of minimum thickness of 0.125 mm which shall be closed by heat sealing and shall contain adequate space to collect leaking material, if any.

3.2 Marking — The containers shall bear legibly and indelibly the following information in addition to the information as is necessary under the Insecticides Act and Rules:

- a) Name of the material;
- b) Name of the manufacturer;
- c) Date of manufacture;
- d) Batch number;
- e) Net volume of contents;
- f) Nominal phenthoate content, percent mass/mass; and
- g) The minimum cautionary notice worded as follows:

‘ POISONOUS. HANDLE WITH CARE. KEEP MATERIAL OUT OF REACH OF CHILDREN AND WELL AWAY FROM FOODSTUFFS, ANIMAL FEEDS, AND THEIR CONTAINERS. AVOID SKIN CONTACT. WHILE HANDLING WEAR PROTECTIVE GLOVES AND CLEAN PROTECTIVE CLOTHING. IN CASE OF POISONING CALL THE PHYSICIAN. SPECIFIC ANTIDOTES — ATROPINE AND PRALIDOXIME.’

3.2.1 In addition to the above, the container shall also be marked with symbol for danger of poisoning as specified in IS : 1260 (Part I)-1973‡.

*Method of tests for pesticides and their formulations.

†Requirements for packing of pesticides: Part II Liquid pesticides.

‡Pictorial markings for handling and labelling of goods: Part I Dangerous goods (first revision).

3.2.2 The containers may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

4. SAMPLING

4.1 Representative samples of the material shall be drawn as prescribed in ' Indian Standard method for sampling of pesticides and their formulations (*under preparation*) '.

NOTE — Till such time the standard under preparation is published, the matter shall be as agreed to between the parties concerned.

5. TESTS

5.1 Tests shall be carried out as prescribed in 2.2.2 to 2.2.5, 2.3.1 and 2.3.2.

5.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (*see* IS : 1070-1960*) shall be employed in tests.

NOTE — ' Pure chemicals ' shall mean chemicals that do not contain impurities which affect the results of analysis.

*Specification for water, distilled quality (*revised*).

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